Updated February 5, 2017

POLITICAL NETWORKS
Government 319 001 (CRN: 15607)
George Mason University
Monday & Wednesday 1:30pm – 2:45pm
Robinson Hall B 106
Spring 2017

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Office Hours: Mondays & Wednesdays 10:30am – 12:00pm, or by appointment
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Teaching Assistant: Aubrey Grant, agrant12@gmu.edu
Office Hours: Sundays, 3:00 – 5:00pm, on-line (Blackboard Discussion Group)

Schar School Main Office: Robinson Hall-A, 201

I. Course Description

The study of networks, connections, or relationships in politics is intuitive. In this course we learn the theory, methods, and applications of a systematic study of networks in politics. For many decades the study of politics has been dominated by studying individuals and institutions. In this course, we challenge the basic assumptions of those individualistic approaches and look at specific cases where it may be unreasonable to assume that people or events are independent of one another. The course is interdisciplinary, drawing strongly from sociology, statistics, and computer science. Networks are a ubiquitous feature of the natural and social world and we will draw upon examples and lessons from many fields, from genetics to anthropology, to understand how networks operate in politics. The course covers theories of social network analysis and applies them to questions of politics. To do so, we will also apply methodological tools and software to social network data. The course is introductory and provides somewhat of a survey of the field. Students are not required to have a quantitative background, but those who have previous experience with statistics or data analysis may have an advantage in becoming familiar with the techniques.

II. Course Objectives

I have three broad objectives for this course. First, students will learn the fundamental theoretical and methodological concepts in social network analysis as it relates to politics. Second, students will learn basic network analytical skills and develop the ability to use basic tools in at least one software program. This will include best practices for gathering and managing network data. Third, I aim to stimulate students' curiosity about politics and creative means of studying questions pertinent to modern problems and interests.

III. Teaching Philosophy and Teaching Style

My teaching philosophy is based on three primary principles.

- First, I believe the gap between undergraduate and graduate coursework in political science is too broad. I therefore introduce advanced theoretical concepts in undergraduate classes so that students understand the true value of studying politics as a science; moreover, should any student choose to pursue advanced or graduate work in political science, they will be well prepared.

- Second, I believe in incorporating current events into classroom lessons. Nothing in science seems concrete until one can "see it with their own eyes." Reading a daily newspaper and following current events, then applying theoretical concepts to political happenings helps to clarify theoretical concepts and demonstrate their utility.

- Third, as this class has a significant practical component, I intend to provide ample opportunities for students to practice techniques in and out of class using exercises and other pedagogical devices. It will be important for students to remain active with the activities and to engage in practice with the software and techniques. Learning is an active, not passive, process.

- Finally, as an instructor and a leader of class discussions on everything from lawmaking to elections, I aim to remain politically neutral and non-partisan. Students should learn to collect and evaluate information on their own. I would not want students who disagree with my political views to hear all course information with a skeptical ear; nor would I want students who tend to agree with my views to accept everything I say at face value. I encourage students to express their views, be critical, and challenge information when it is appropriate.

My teaching style is consistent with my philosophy. I use a Socratic-style in the classroom in which I frequently ask questions and encourage an interactive learning experience. I do my best to learn students' names, encourage participation, and create, what I hope is, an open learning environment where students feel free to question, comment, and explain how they view course content. Such an environment helps to foster student interaction, thinking, and analytical and creative skills. Moreover, while lectures are important because they help to distribute necessary information and facts, they are not usually the most effective way to learn information. For this reason, we will do a variety of activities in the classroom. Successful performance in this course will include classroom participation and working in and out of class with your peers.

IV. Student Responsibilities

A. Class Attendance and Participation. Learning is an *active*, rather than *passive*, exercise. Accordingly, every student is expected to attend class as well as be prepared to ask questions about and comment on the readings. You need to complete the daily reading assignment *prior*

to the class meeting. You will be much more successful in this class if you attend regularly, take notes, pay attention, and participate.

B. Readings. As is the case with attendance, keeping pace with the reading is essential to succeeding in this class. It is *your* responsibility to obtain copies of the readings prior to the date we will discuss them in class. I will do everything I can to make this task easier for you. You will be much more successful in this course if you complete the assigned readings and **take notes** on them.

C. Technology **The use of laptop computers, tablets (such as iPads), and smart phones is prohibited in class,** except when instructed to do so. The costs associated with electronic distractions, to you and those around you, outweigh the benefits of immediate supplementary classroom information. Students may use specific instructional applications, such as *Blackboard*, only when instructed to do so. However, students may not use laptops or other devices on a general basis in this class. If these restrictions pose a challenge for you, please discuss it with me. For more information on the benefits of taking notes by hand, see this.

D. Cheating, Plagiarism, and Academic Integrity. Students in this course will be expected to comply with the George Mason University Honor Code (see http://honorcode.gmu.edu/). There are three simple guidelines to follow with respect to academic integrity: (1) all work you submit must be your own; (2) when using the work or ideas of others, including fellow students, give full credit through accurate citations; and (3) if you are uncertain about the expectations for any assignment, ask for clarification. Any student engaged in any academic misconduct *will receive an F on the offending exam or assignment.* Egregious violations will result in an F grade for the course and will be reported to the appropriate Dean's office. These violations include cheating on an exam, using someone else's work as your own, and plagiarizing the written word. Plagiarism (using someone else's words or ideas without providing credit or citation) is a serious offense. *If you have any questions at all about what constitutes cheating, plagiarism, or academic misconduct, please ask the instructor.*

E. Students with Disabilities. If you have a disability for which you are or may be requesting an accommodation, please let me (the instructor) know and contact the Office of Disability Services (ODS) at (703) 993-2474 or *http://ods.gmu.edu*. All discussions with me regarding disabilities are confidential.

V. Course Requirements and Graded Evaluation

There are four graded requirements for this course, described below. Grades will be calculated on a non-curved typical A-F scale where,

93-100	A	87-89	B+	77-79	C+	67-69	D+	< 60	F
90-92	A-	83-86	B	73-76	C	63-66	D		
		80-82	B-	70-72	C-	60-62	D-		

Problem Set Assignments (20%) There will be weekly exercises for students to complete. Most of these will be able to be completed on-line or completed through a software program (UCInet) and submitted on-line. Details on these assignments will be presented in class and on Blackboard.

Midterm Exam (25%) This will be an in-class exam covering material from the first half of the course. The exam will include multiple choice, short answer, and analytical (homework style) questions based on material presented in class and in the readings. A study guide will be posted on-line no later than one-week before the exam. The midterm will be in-class on **Wednesday, March 8.**

Project/Term Paper (25%) Each student will complete a term paper that includes an analytical project. In these projects students will use one of several suggested datasets and demonstrate ability to apply analytical concepts to original questions relating to the dataset of choice. Papers will be 8 -10 pages in length, use proper citations, and engage an original question that is approached with theoretical and analytical creativity.

Final Exam (30%). This will be an in-class exam covering material from the entire course (comprehensive), though concentrating on material from the last half of the course. The exam will include identifications, short answers, and analytical questions based on class exercises, material presented in class, and in the readings. A study guide will be posted on-line no later than one-week before the exam. The exam will be administered during the regular final exam scheduled time for our class on **Wednesday, May 10, 2017 at 1:30pm – 4:15pm**. This is the ONLY time to take the exam.

VI. Policies on late work, make-ups and extra credit

A. *Can I submit an assignment late?* Students may submit an assignment after its due date for a 5% (off the total possible score) penalty per-24-hour period that the assignment is late.

B. *What if I miss an exam?* Make-up exams are only given in the case of verified illness or family emergency, such as a death in the family. Documentation is necessary to receive a qualified make-up examination. Students who arrive late to an in-class exam may still sit for the exam if no other student has already submitted their exam; once a single student hands-in their exam, no others may begin the exam.

C. *Do you offer extra credit?* No.

D. *What can I do if I perform poorly on an assignment?* Students who receive a 72% or less on a homework assignment or essay (not exam) may re-do the assignment for a replacement grade. Re-do assignments are subject to a 5% per day penalty starting from the day graded assignments were returned to students in class (regardless of

attendance). Assignments that were originally submitted past the due date are NOT eligible for re-do.

VII. Texts

The reading assignments are chosen to buttress and expand on the analytic foundation laid in class. **Please notify the instructor about problems obtaining the readings as soon as possible**. The following materials are required and can be found at the campus bookstore.

Barabasi, Albert-laszlo. 2014. *Linked: How Everything Is Connected to Everything Else and What It Means for Business, Science, and Everyday Life*. 3/30/03 edition. New York: Basic Books.

Borgatti, Stephen P., Martin G. Everett, and Jeffrey C. Johnson. 2013. *Analyzing Social Networks*. SAGE.

Christakis, Nicholas A., and James H. Fowler. 2009. *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives*. Little, Brown.

Hanneman, Robert, and Mark Riddle. [ON-LINE] n.d. *Introduction to Social Network Methods*. Riverside, CA: University of California, Riverside. http://faculty.ucr.edu/~hanneman/nettext/.

Victor, Jennifer Nicoll, Alexander H. Montgomery, and Mark Lubell, eds. *Oxford Handbook of Political Networks*, (in press). Select Chapters assigned and available on-line first at http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780190228217.001.0001/oxfordhb-9780190228217 (access through Mason libraries for full access)

VIII. Software

Students need to purchase ***UCInet*** software for network analysis. More information is available here: https://sites.google.com/site/ucinetsoftware/home
A student license is $40. A 90-day free trial is available, but will not cover the whole semester.

IX. Course Schedule and Reading Assignments

Mon., Jan. 23 INTRODUCTION TO THE COURSE AND THE STUDY OF NETWORKS IN POLITICS

PART I: FOUNDATIONS AND TOOLS

Wed., Jan. 25 DEVELOPING INTUITIONS
Barabasi, Ch. 1
Barabasi, Ch. 2
Christakis & Fowler, Preface & Ch. 1
Victor, Jennifer Nicoll, Alexander H. Montgomery, and Mark Lubell. 2017 (in press), "Introduction" in *Oxford Handbook of Political Networks*, Victor, Montgomery and Lubell, eds. AVAILABLE ON BLACKBOARD

Mon., Jan, 30 FUNDAMENTAL COMPONENTS OF A NETWORK
Borgatti, et al., Ch. 1 (pp. 1-10)
Hanneman and Riddle, Preface
Hanneman and Riddle, 2. Why formal methods?
Patty, John and Maggie Penn, "Network Theory and Political Science," (2016) in Oxford Handbook of Political Networks, Victor, Montgomery, & Lubell, eds. AVAILABLE ON BLACKBOARD.

Wed., Feb. 1 MATHEMATICAL FOUNDATIONS OF GRAPH THEORY
Borgatti, et al., Ch. 2 (pp. 11-18)
Hanneman and Riddle, 1. Social Network Data
Hanneman and Riddle, 5. Matrices

Mon., Feb. 6 SOFTWARE INTRODUCTION AND DEMONSTRATION
Borgatti, et al., Ch. 2 (pp. 18-23)
Hanneman and Riddle, 6. Working with Data
Gross, Justin H. and Joshua Jansa, "Relational Concepts, Measurement, and Data" (2016) in *Oxford Handbook of Political Networks*, Victor, Montgomery, & Lubell, eds. AVAILABLE ON BLACKBOARD.

Wed., Feb. 8 SOCIAL NETWORK RESEARCH DESIGN AND DATA COLLECTION
Borgatti, et al., Ch. 3
Borgatti, et al., Ch. 4

Mon., Feb. 13 WORKING WITH NETWORK DATA
Borgatti, et al., Ch. 5

Wed., Feb. 15 FINDING NETWORKS
Christakis & Fowler, Ch. 2
Christakis & Fowler, Ch. 3

Mon., Feb. 20 IT'S A SMALL WORLD, AFTER ALL
Barabasi, Ch. 3
Barabasi, Ch. 4

Wed., Feb. 22 THE UBIQUITY OF NETWORKS
"Connected: The Power of Six Degrees," a documentary film by Annamaria Talas (2009). We will watch this movie in class on this day.
Barabasi, Ch. 5
Barabasi, Ch. 6
Christakis & Fowler, Ch. 4
Christakis & Fowler, Ch. 5

Mon., Feb. 27 VISUALIZATION OF NETWORK DATA
Borgatti, et al., Ch. 7
Malik, Momin and Jurgen Pfeffer, "Network Visualization," (2016) in *Oxford Handbook of Political Networks*, Victor, Montgomer, and Lubell, eds.

Wed., Mar. 1 VISUALIZATION OF NETWORK DATA, II
Hanneman and Riddle, 3. Graphs
Hanneman and Riddle, 4. Netdraw

Mon., Mar. 6 IN-CLASS MIDTERM EXAM REVIEW

Wed., Mar. 8 **MIDTERM EXAM**

Spring Break
March 13-17, 2017

Part II: Network Properties & Applications

Mon., Mar. 20 THE WHOLE ENCHILADA
Borgatti, et al., Ch. 9 (Cohesion, density, reciprocity, transitivity, clustering)
Christakis & Fowler, Ch. 9

Wed., Mar. 22 CENTRALITY AND POWER
Borgatti, et al., Ch. 10
Hanneman & Riddle, Ch. 10

Mon., Mar. 27 NETWORK APPLICATIONS: PHYSICS AND POLITICS
Barabasi, Ch. 7
Barabasi, Ch. 8
Christakis & Fowler, Ch. 6

Wed., Mar. 29 CONNECTIVITY
Hanneman & Riddle, Ch. 7

Mon., Apr. 3 OUR CONNECTED WORLD
Christakis & Fowler, Ch. 7
Christakis & Fowler, Ch. 8

Wed., Apr. 5 NETWORK POSITIONS
Hanneman & Riddle, Ch. 8 (Embedding)

Mon., Apr. 10 SUBGROUPS
Borgatti, et al., Ch. 11

Wed., Apr. 12 CLIQUES AND CLUSTERS
Hanneman & Riddle, Ch. 11

Mon., Apr. 17 NETWORKS IN AMERICAN POLITICS: INSTITUTIONS I
Herrnson Paul, and Justin H. Kirkland, "Political Parties and Campaign Finance," (2016) in *Oxford Handbook of Political Networks*, Victor, Montgomery, & Lubell, eds. AVAILABLE ON BLACKBOARD.
Koger, Gregory, Seth E. Masket, and Hans Noel, "American Political Parties as Networks," (2016) in *Oxford Handbook of Political Networks*, Victor, Montgomery, & Lubell, eds. AVAILABLE ON BLACKBOARD.

Wed., Apr. 19 NETWORKS IN AMERICAN POLITICS: INSTITUTIONS II
Box, Steffensmeier, Janet, and Dino Christensen, "Judicial Networks," (2016) in *Oxford Handbook of Political Networks*, Victor, Montgomery, & Lubell, eds. AVAILABLE ON BLACKBOARD.
Heaney, Michael and James Strickland, "A Network Approach to Interest Group Politics," (2016) in *Oxford Handbook of Political Networks*, Victor, Montgomery, & Lubell, eds. AVAILABLE ON BLACKBOARD.
Ringe, Nils, Jennifer N. Victor, and Wendy K. T. Cho, "Legislative Networks" (2016) in *Oxford Handbook of Political Networks*, Victor, Montgomery, & Lubell, eds. AVAILABLE ON BLACKBOARD.

Mon., Apr. 24 NETWORKS IN AMERICAN POLITICS: POLITICAL BEHAVIOR
Rolfe, Meredith and Stephanie Chan, "Voting and Participation," (2016) in *Oxford Handbook of Political Networks*, Victor, Montgomery, & Lubell, eds. AVAILABLE ON BLACKBOARD.
Santoro, Lauren Ratliff and Paul Beck, "Social Networks and Vote Choice" (2016) in *Oxford Handbook of Political Networks*, Victor, Montgomery, & Lubell, eds. AVAILABLE ON BLACKBOARD.

Wed., Apr. 26. NETWORKS IN UBIQUITY (REPRISE)
Barabasi, Chs. 9-14

Mon., May 1 ADVANCED NETWORK TOPICS (OR IN-CLASS WORKSHOP)
Borgatti, et al., Ch. 12 (Equivalent Networks)
Hanneman & Riddle, 12. Equivalence
Hanneman & Riddle, 13. Similarity and Structural Equivalence

Wed., May 3 ADVANCED NETWORK TOPICS (OR IN-CLASS REVIEW)
Borgatti, et al., Ch. 13 Two-mode networks
Hanneman & Riddle, 17. Two-mode networks
Borgatti, et al., Ch. 14 Large networks
Hanneman & Riddle, 16. Multiplex
Borgatti, et al., Ch. 6 (multivariate analysis)

Borgatti, et al., Ch. 8 (hypothesis testing)

Mon., May 15 **FINAL EXAM 1:30PM – 4:15PM**